



Memorandum

DATE: July 13, 2015

TO: Michael Johnson, LSJRC Manager

COPY TO: Lower San Joaquin River Committee
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SUBJECT: **Development of a Basin Plan Amendment for Salt and Boron in the Lower San Joaquin River (LSJR):**
Task 7 – Substitute Environmental Documentation

INTRODUCTION

This memorandum is being submitted on behalf of the LWA Team¹ to fulfill the requirements of Task 7 in the Scope of Work for the *Development of a Basin Plan Amendment for Salt and Boron in the Lower San Joaquin River* (Workplan). The purpose of Task 7 is to utilize the previous scoping efforts of the Central Valley Regional Water Quality Control Board to prepare an environmental analysis of the proposed WQO objective and implantation plan for Reach 83 of the LSJR (Preferred Alternative). Information generated in *Task 4 – Implementation Planning for Proposed Salinity Objectives*, July 13, 2015, (Task 4 Report) with regard to the Preferred Alternative was used to support the development of the attached substitute environmental document and California Environmental Quality Act (CEQA) Environmental Checklist.

¹ The LWA Team consists of the following firms: Larry Walker Associates, Carollo Engineers, Kennedy/Jenks Consultants, Systech Water Resources, PlanTierra, Luhdorff and Scalmanini Consulting Engineers, Ascent Environmental, and Dr. Richard Howitt.

ENVIRONMENTAL CHECKLIST

The Central Valley Regional Water Quality Control Board (Central Valley Water Board, CVRWQCB or Board), as a Lead Agency under the California Environmental Quality Act (CEQA), is responsible for evaluating all the potential environmental impacts that may occur because of changes made to the Water Quality Control Plan for the Sacramento River and San Joaquin River Basins (Basin Plan). (Public Resources Code, Section 21000 et seq.) The Secretary of Resources has determined that the Central Valley Water Board’s Basin Planning Process qualifies as a certified regulatory program pursuant to Public Resources Code Section 21080.5 and California Code of Regulations, Title 14, Section 15251(g). This determination means that the Central Valley Water Board’s Basin Planning process needs only to comply with abbreviated CEQA requirements. The Staff Report and this Checklist satisfy the requirements of State Water Board’s Regulations for Implementation of CEQA, Exempt Regulatory Programs, which are found at California Code of Regulations, Title 23, Section 3775 et seq.

PROJECT INFORMATION

1. Project Title: Development of a Basin Plan Amendment for Salt and Boron in the Lower San Joaquin River (LSJR)

LSJR Reach 83 EC Objective and Recommended Performance Goal for Seasonal and Water Year Considerations
2. Lead Agency Name and Address: Central Valley Regional Water Quality Control Board
11020 Sun Center Drive, #200, Rancho Cordova, CA 95670
3. Contact Person and Phone Number: Anne Littlejohn, Senior Environmental Scientist, (916) 464-4840
Jeanne Chilcott, Environmental Program Manager, (916) 464-4788
4. Project Location: The project is located within the Lower San Joaquin River watershed, in the Central Valley within portions of San Joaquin, Stanislaus, Merced, Madera, and Fresno Counties. Reach 83 of the Lower San Joaquin River is where proposed salinity objectives would apply and is defined as that segment of the San Joaquin River from the mouth of the Merced River to Vernalis.
5. Project Sponsor’s Name and Address: Lower San Joaquin River Committee through coordination with CV-SALTS
6. General Plan Designation: N/A (multiple jurisdictions)
7. Zoning: N/A (multiple jurisdictions)
8. Description of Project: (Describe the whole action involved, including but not limited to later phases of the project, and any secondary, support, or off-site features necessary for its implementation. Attach additional sheets if necessary.)

All text highlighted yellow is considered DRAFT pending final approval by the Lower San Joaquin River Committee.

The proposed action (Preferred Alternative) is to adopt an electrical conductivity (EC) water quality objective (WQO) and a recommended EC Performance Goal for seasonal and water year considerations in Reach 83¹ of the Lower San Joaquin River (LSJR), as shown in **Table 1**. The proposed EC WQO and recommended Performance Goal are protective of the existing agricultural irrigation supply water (AGR) beneficial use and the potential municipal and domestic supply (MUN) beneficial use designated in Reach 83. The WQO and recommended Performance Goal consider agriculture’s seasonal demands for water diverted from Reach 83, while at the same time accounting for the fact that ambient water quality conditions are greatly influenced by the hydrologic conditions, including the presence of return flows, in the San Joaquin River Basin.

The Preferred Alternative includes an EC WQO of 1,550 µmhos/cm. Compliance with the WQO in Reach 83 shall be evaluated as a 30-day running average at Crows Landing. The WQO would apply as indicated in **Table 1**, except during an “extended dry period”. An Extended Dry Period is defined as follows:

An Extended Dry Period is defined using the State Water Resources Control Board’s (SWRCB) San Joaquin Valley “60-20-20” Water Year Hydrologic Classification^{2,3} included in Water Right Decision 1641 to assign a numeric indicator to a water year type as follows (SWRCB 2000):

- Wet – 5
- Above Normal – 4
- Below Normal – 3
- Dry – 2
- Critically Dry – 1

The indicator values are used to determine when an Extended Dry Period is in effect in the following manner:

- An Extended Dry Period shall begin when the sum of the current year’s 60-20-20 indicator value and the previous two year’s 60-20-20 indicator values total six (6) or less.
- An Extended Dry Period shall be deemed to exist for one water year (12 months) following the period with an indicator value total of six (6) or less.

During an Extended Dry Period (defined above), the following factors shall be taken into consideration to ensure that the beneficial uses are protected in Reach 83 of the LSJR (as measured at Crows Landing):

- To protect the designated potential MUN beneficial use, the EC WQO shall be 2,200 µmhos/cm as the average of the previous four (4) quarterly averages.
- To protect the AGR beneficial use, EC in Reach 83 of the LSJR shall be 2,240 µmhos/cm⁴ as a 30-day running average.

¹ Reach 83 is defined as that segment of the San Joaquin River from the mouth of the Merced River to Vernalis.

² The calculation method for the 60-20-20 Water Year Hydrologic Classification is set forth in Figure 2 of the Water Right Decision 1641, March 2000.

³ The water year type classification will be established using the best available estimate of the 60-20-20 San Joaquin Valley Water Year Hydrologic Classification (as defined in Footnote 13 for Table 3 in the SWRCB’s Water Right Decision 1641, March 2000) at the 75% exceedance level using data from the California Department of Water Resources Bulletin 120 series.

⁴ An EC of 2,240 µmhos/cm to protect the AGR beneficial use in Reach 83 during Extended Dry Periods is based on Hoffman model results that would provide 80% protection of common crop (almonds).

- EC concentrations above 1,550 µmhos/cm shall not result in requirements for increased water quality releases from New Melones Reservoir to meet the Vernalis EC objectives.

Table 1: LSJR Reach 83 EC Objective and Recommended Performance Goal for Seasonal and Water Year Considerations (µmhos/cm).

Water Year Type	Irrigation Season		Non-irrigation Season
	March – June	July - October	November - February
Wet	1350 (Performance Goal ¹)		1550 (WQO ²)
Above Normal	1350 (Performance Goal ¹)		1550 (WQO ²)
Below Normal	1350 (Performance Goal ¹)	1550 (WQO ²)	
Dry	1350 (Performance Goal ¹)	1550 (WQO ²)	
Critical	1550 (WQO ²)		

1. The recommended Performance Goal will be used to measure progress toward achievement of EC levels during certain water years and times of the year when EC levels less than the EC WQO are considered achievable in Reach 83.

2. The EC WQO is subject to relaxation during an Extended Dry Period (see definition above).

The Preferred Alternative also includes a Performance Goal of 1,350 µmhos/cm that is recommended to be established throughout the irrigation season during specific water year types (see **Table 1**). This value was established as a Performance Goal because:

- The Watershed Analysis Risk Management Framework (WARMF) modeling of the Planned Bundle (Planned Alternative) indicates that, after full implementation of the key actions underway within the LSJR Basin, the ambient water quality within Reach 83 of the LSJR will not exceed an EC value of 1,350 µmhos/cm. However, due to model uncertainty, the WQO was set at 1,550 µmhos/cm which is the value that is protective of the most sensitive crop grown in the area based on Hoffman modeling results.
- Agricultural supply water at 1,350 µmhos/cm would provide a higher level of protection during the irrigation season by increasing crop yield above 95 percent, based on Hoffman modeling results.
- It would help to maintain the soil salinity balance by flushing salt accumulated during Extended Dry Periods from the soil root zone.

The recommended EC Performance Goal and the Extended Dry Period exception included in the Preferred Alternative are advanced in recognition of the existing AGR and potential MUN beneficial uses that must be supported for the water diverted from Reach 83, as well as the seasonal and annual hydrologic conditions that affect both the quantity and quality of the water in the LSJR. The Performance Goal will be used to measure progress toward achievement of EC levels during the irrigation season of non-critical water years when EC levels lower than the EC WQO would be beneficial to agriculture and are considered achievable. The Extended Dry Period exception exists to allow discharges to the LSJR to occur under hydrologic conditions (e.g., low flows and elevated EC levels) when it is anticipated that agriculture will value water availability over water quality. A detailed discussion of the project alternatives considered, including the Preferred Alternative, is provided in *Development of a Basin Plan Amendment for Salt and Boron in the Lower San Joaquin River (LSJR): Task 4 – Implementation Planning for Proposed Salinity Objectives* (LWA 2015a).

Proposed Program of Implementation

In addition to the actions already being implemented within the San Joaquin River Basin (Basin), the following are key actions that would assist in meeting the proposed EC WQOs.

- ▲ **Full Implementation of the Real Time Management (RTM) Program** – The RTM is an umbrella program to optimize/maximize the export of salt from groundwater, perched zones, and agricultural drain water from

the LSJR Basin while ensuring that salinity and boron WQOs are met at Vernalis. The CVRWQCB has approved the RTMP in the Basin Plan as an alternative salt management strategy in lieu of monthly salt load allocations enforced by the CVRWQCB. RTM facilitates the control and timing of wetland and/or agricultural drainage to the LSJR to coincide with periods when dilution flows are sufficient to meet salinity objectives. It is anticipated that the RTM Program would be fully implemented by 2020.

- ▲ Full Implementation of the Grassland Bypass Project - Initiated in 1996, the Grassland Bypass Project (GBP) has prevented subsurface drainage discharges with elevated levels of selenium, salt and boron from entering channels supplying wetland habitat by consolidating and then discharging the drainage via a portion of the San Luis Drain to Mud Slough and then to the LSJR. In addition, the Grassland Bypass Project has progressively reduced the loads of these constituents entering the San Luis Drain by approximately 80 percent, 63 percent, and 63 percent, respectively, since the project was implemented. Phase I of the GBP was operated under waste discharge requirements (WDRs) issued in 1998 and Phase II was covered by a 2001 WDR update. New WDRs are scheduled for adoption in July 2015 for Phase III of the project, which is located in the Grassland watershed sub-basin of the San Joaquin River Basin. It is projected, based on Watershed Analysis Risk Management Framework (WARMF) modeling results, that the Preferred Alternative EC WQO of 1,550 $\mu\text{mhos/cm}$ can be consistently achieved after full implementation of the GBP. The GBP is currently scheduled to be completed by December 31, 2019. As such, the effective date of the proposed action should be established to coincide with the completion of the GBP.
- ▲ Water Quality Monitoring - Routine EC and boron monitoring would be conducted in the LSJR at Crows Landing and Maze Road Bridge to assess compliance with the proposed EC WQO and recommended Performance Goal and the existing boron WQOs for Reach 83 to determine the effectiveness of the implementation program. A long-term monitoring and reporting program will be developed to determine compliance with the EC WQO and recommended Performance Goal in Reach 83, as well as evaluate the effectiveness of the implementation program. The long-term monitoring and reporting program are described in detail in the Task 6 Memorandum written in support of the proposed project (LWA 2015b).

The RTM Program and Grassland Bypass Project have previously been approved. Consequently, the environmental checklist is not required to consider the effects of these actions that are identified as helping the Basin meet the proposed EC WQO.

Direct and Indirect Physical Environmental Effects

Implementation of the key actions above, in addition to the actions already being implemented within the Basin, are anticipated to meet the EC WQO that would be promulgated by the proposed action. The proposed action also includes establishment of a recommended EC Performance Goal in Reach 83 and routine EC and boron monitoring in the LSJR at Crows Landing and Maze Road Bridge. The EC and boron monitoring would not result in adverse physical effects to the environment. The proposed action would not result in any direct or indirect environmental effects that have not already been evaluated in other CEQA documents for other approvals.

Comments Received

The Central Valley Water Board hosted a public scoping meeting for the proposed action on March 30, 2009. Public comments were received until April 15, 2009. A list of the commenters and their respective organizations is presented in Table 2. The Central Valley Water Board took into consideration all comments received when selecting the proposed action. Additionally, copies of the letters are attached in Appendix A.

Table 2 List of Commenters				
Letter Number	Commenter	Date	Agency/Organization	Topic/Concern
1	Daniel B. Cozad	3/16/2009	Central Valley Salinity Coalition (CV SALTS)	Coordination amongst CV SALTS and CVRWQCB for establishing standards for SJR
2	Dustin Cooper	4/14/2009	San Joaquin River Exchange Contractors Water Authority	Consistency of the SED under CEQA
3	Kenneth Petruzzelli	4/14/2009	San Joaquin River Group	Evaluate beneficial uses; CALSIM II modeling; Real Time Management program
4	Karna E. Harrigfeld	4/15/2009	Stockton East Water District	Timeline; identifying salt sources; reduced flows because of TMDL
5	Dante John Nomellini, Jr.	4/15/2009	Central Delta Water Agency/South Delta Water Agency	Establishing salinity and boron objectives above Vernalis
6	Deeanne M. Gillick	4/15/2009	County of San Joaquin/San Joaquin County Flood Control and Water Conservation District	Timeline; reduced flows; protection of beneficial uses; New Melones flow
7	Michelle Light	4/15/2009	U.S. Bureau of Reclamation	Suggested models and methods of analysis

9. Surrounding Land Uses and Setting: (Briefly describe the project's surroundings)

Reach 83 of the LSJR is the applicable segment where proposed salinity levels will apply. Reach 83 flows northwest through the San Joaquin Valley, from the San Joaquin River's confluence with the Merced River to Vernalis. The land surrounding Reach 83 consists primarily of farmland.

10: Other public agencies whose approval is required: (e.g., permits, financing approval, or participation agreement)

No other subsequent approvals are required for the proposed action.

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED:

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages.

- | | | |
|---|---|---|
| <input type="checkbox"/> Aesthetics | <input type="checkbox"/> Agriculture and Forest Resources | <input type="checkbox"/> Air Quality |
| <input type="checkbox"/> Biological Resources | <input type="checkbox"/> Cultural Resources | <input type="checkbox"/> Geology / Soils |
| <input type="checkbox"/> Greenhouse Gas Emissions | <input type="checkbox"/> Hazards & Hazardous Materials | <input type="checkbox"/> Hydrology / Water Quality |
| <input type="checkbox"/> Land Use / Planning | <input type="checkbox"/> Mineral Resources | <input type="checkbox"/> Noise |
| <input type="checkbox"/> Population / Housing | <input type="checkbox"/> Public Services | <input type="checkbox"/> Recreation |
| <input type="checkbox"/> Transportation / Traffic | <input type="checkbox"/> Utilities / Service Systems | <input type="checkbox"/> Mandatory Findings of Significance |
| | | <input type="checkbox"/> None With Mitigation |

EVALUATION OF THE ENVIRONMENTAL IMPACTS IN THE CHECKLIST

1. The board must complete an environmental checklist before the adoption of plans or policies for the Basin/208 Planning program as certified by the Secretary for Natural Resources. The checklist becomes a part of the Substitute Environmental Documentation (SED).
2. For each environmental category in the checklist, the board must determine whether the project will cause any adverse impact. If there are potential impacts that are not included in the sample checklist, those impacts should be added to the checklist.
3. If the board determines that a particular adverse impact may occur as a result of the project, then the checklist boxes must indicate whether the impact is “Potentially Significant,” “Less than Significant with Mitigation Incorporated,” or “Less than Significant.”
 - a. “Potentially Significant Impact” applies if there is substantial evidence that an impact may be significant. If there are one or more “Potentially Significant Impact” entries on the checklist, the SED must include an examination of feasible alternatives and mitigation measures for each such impact, similar to the requirements for preparing an environmental impact report.
 - b. “Less than Significant with Mitigation Incorporated” applies if the board or another agency incorporates mitigation measures into the SED that will reduce an impact that is “Potentially Significant” to a “Less than Significant Impact.” If the board does not require the specific mitigation measures itself, then the board must be certain that the other agency will in fact incorporate those measures.
 - c. “Less than Significant” applies if the impact will not be significant, and mitigation is therefore not required.
 - d. If there will be no impact, check the box under “No Impact.”
4. The board must provide a brief explanation for each “Potentially Significant,” “Less than Significant with Mitigation Incorporated,” “Less than Significant,” or “No Impact” determination in the checklist. The explanation may be included in the written report described in section 3777(a)(1) or in the checklist itself. The explanation of each issue should identify: (a) the significance criteria or threshold, if any, used to evaluate each question; and (b) the specific mitigation measure(s) identified, if any, to reduce the impact to less than significant. The board may determine the significance of the impact by considering factual evidence, agency standards, or thresholds. If the “No Impact” box is checked, the board should briefly provide the basis for that answer. If there are types of impacts that are not listed in the checklist, those impacts should be added to the checklist.
5. The board must include mandatory findings of significance if required by CEQA Guidelines section 15065.
6. The board should provide references used to identify potential impacts, including a list of information sources and individuals contacted.

1 AESTHETICS

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
I. AESTHETICS. Would the project:				
a) Have a substantial adverse effect on a scenic vista?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

1.1.1 Discussion

The project area stretches from the Merced River to Vernalis through San Joaquin and Stanislaus counties near the cities of Manteca, Tracy, Modesto, and Turlock. The project site borders lands designated for agricultural activities by both counties. Interstate 5 (I-5) runs through the southwest of Stanislaus County and branches off into Interstate 580 (I-580) which extends along the southwest of San Joaquin County. Caltrans designates these segments as State Scenic Highway (Caltrans 2011a; 2011b).

The proposed action involves establishing a new EC WQO that primarily would be met through the implementation of the previously approved RTM Program and completion of the Grassland Bypass Project. The new salinity objective was developed in consideration of State and federal regulations, including the State’s Sources of Drinking Water Policy, the Basin Plan, State and federal water regulations, and other State and federal requirements relevant to drinking water, stock drinking water, agricultural irrigation uses, and aquatic life protection. The proposed action also includes establishment of an EC Performance Goal in Reach 83 and routine EC and boron monitoring in the LSJR at Crows Landing and Maze Road Bridge. The action’s primary objective is to protect the AGR (irrigation supply water) beneficial use in Reach 83 of the LSJR. Implementation would not require any physical disturbance or ground moving activities, or any other physical effect that may affect aesthetic resources. Project operation would not include any new sources of light or nighttime glare nor would implementation affect the integrity of any State Scenic Highway. The project would result in **no impact**.

2 AGRICULTURE AND FOREST RESOURCES

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
II. AGRICULTURE AND FOREST RESOURCES.				
<p>In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997, as updated) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state’s inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board.</p>				
Would the project:				
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with existing zoning for agricultural use or a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Result in the loss of forest land or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Involve other changes in the existing environment, which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

2.1.1 Discussion

The project area contains several urban areas, such as the cities of Modesto, Turlock, Merced, and Los Banos, as well as other rural communities that are generally situated near regional roadways. These cities and communities are surrounded by agricultural lands, including lands designated as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Department of Conservation [DOC] 2015). There are no forest lands within the project area.

The proposed action involves implementing a new EC WQO that primarily would be met through the implementation of the RTM Program and completion of the Grassland Bypass Project, which have previously been approved. The new salinity objective was developed in consideration of State and federal regulations, including the State's Sources of Drinking Water Policy, the Basin Plan, State and federal water regulations, and other State and federal requirements relevant to drinking water, stock drinking water, agricultural irrigation uses, and aquatic life protection. Additionally, the proposed action included establishment of an EC Performance Goal in Reach 83, as well as routine EC and boron monitoring in the LSJR at Crows Landing and Maze Road Bridge. The proposed action would set a new EC WQO for water diverted from Reach 83 that is used for irrigation, and was developed to provide reasonable protection for the most sensitive AGR beneficial use (irrigation of almonds). The key actions utilized to meet the new EC WQO would not involve land use changes, ground disturbing activities, or other physical effects. Because the proposed action would not result in the loss of agricultural lands, including those designated as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance or land zoned for agricultural use or lands within a Williamson Act contract there would be **no impact**.

Because the project area does not contain forest lands, the proposed action would have **no impact** on forest land.

3 AIR QUALITY

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
III. AIR QUALITY.				
Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied on to make the following determinations.				
Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Create objectionable odors affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

3.1.1 Discussion

The project area is located in San Joaquin and Stanislaus counties. Both counties are within the area regulated for air quality standards attainment by the San Joaquin Valley Air Pollution Control District (SJVAPCD). SJVAPCD is considered an attainment area for the federal 8-hour Carbon Monoxide (CO) standard and an extreme ozone nonattainment area for the federal 8-hour ozone standard.

As previously discussed, the proposed action’s primary objective is to protect the AGR (irrigation supply water) beneficial use in Reach 83 of the LSJR by establishing a new EC WQO. The new salinity objective was developed in consideration of State and federal regulations, including the State’s Sources of Drinking Water Policy, the Basin Plan, State and federal water regulations, and other State and federal requirements relevant to drinking water, stock drinking water, agricultural irrigation uses, and aquatic life protection. The WQO primarily would be achieved through the implementation of the RTM Program and completion of the Grassland Bypass Project. The proposed action also includes establishment of an EC Performance Goal in Reach 83 and routine EC and boron monitoring in the LSJR at Crows Landing and Maze Road Bridge. Implementation and operation of the proposed action would not involve activities that would produce air pollutants. Local air quality plans established by SJVAPCD would not be affected nor would any sensitive receptors in the project area experience an increase in concentrations of air pollutants. There would be **no impact**.

4 BIOLOGICAL RESOURCES

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
IV. BIOLOGICAL RESOURCES. Would the project:				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or the U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations or by the California Department of Fish and Wildlife or the U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

4.1.1 Discussion

Through the establishment of a new EC WQO, the proposed action aims to protect the AGR (irrigation supply water) and MUN (municipal and domestic supply) beneficial uses in Reach 83 of the LSJR. The new salinity objective was developed in consideration of State and federal regulations, including the State’s Sources of Drinking Water Policy, the Basin Plan, State and federal water regulations, and other State and federal requirements relevant to drinking water, stock drinking water, agricultural irrigation uses, and aquatic life protection. The initiation of the previously approved RTM Program and completion of the Grassland Bypass Project would provide the greatest management of salinity loads to achieve the new EC WQO, as well as assist in the protection of wildlife species sensitive to such constituents as selenium. The former project will act to monitor selenium concentrations in the LSJR, along with a number of other water quality parameters, and the latter project will reduce selenium concentrations in the San Luis Drain that ultimately reach the LSJR. Implementation of the proposed action would not result in the physical alteration of a natural environment or have adverse effects on federally- or State-listed species. The proposed action would not

result in adverse physical effects to the environment and would not conflict with any Habitat Conservation Plans, Natural Community Conservation Programs, or local policies designed to protect biological resources. The project would not result in a depletion of biodiversity in aquatic and riparian habitats near the project area. There would be **no impact**.

5 CULTURAL RESOURCES

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
V. CULTURAL RESOURCES. Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Disturb any human remains, including those interred outside of formal cemeteries?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

5.1.1 Discussion

The proposed action requires monitoring and evaluation of salinity levels in Reach 83 of the LSJR. A range of potential salinity levels was reviewed and compared to determine a new EC WQO that is protective of the AGR (irrigation supply water) and MUN (municipal and domestic supply) beneficial uses in Reach 83. The new EC WQO was developed in consideration of State and federal regulations, including the State’s Sources of Drinking Water Policy, the Basin Plan, State and federal water regulations, and other State and federal requirements relevant to drinking water, stock drinking water, agricultural irrigation uses, and aquatic life protection. Achievement of AGR beneficial use protection primarily would occur through the previously approved RTM Program and completion of the Grassland Bypass Project, as well as continued implementation of Basin Plan requirements. The proposed action would not involve physical alterations of existing structures or any ground disturbance. Adverse change or the destruction of significant cultural resources would not result from the monitoring of water quality within Reach 83. There would be **no impact**.

6 GEOLOGY AND SOILS

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
VI. GEOLOGY AND SOILS. Would the project:				
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? (Refer to California Geological Survey Special Publication 42.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
ii) Strong seismic ground shaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
iii) Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
iv) Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994, as updated), creating substantial risks to life or property?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

6.1.1 Discussion

The 2002 Alquist-Priolo Earthquake Fault Zoning Map shows that the project area is not located within any Earthquake Fault Zones; Landslide and Liquefaction Zones; or Fault Zones, Landslide and Liquefaction Zones (DOC 2002). The project site is located within San Joaquin and Stanislaus counties, inland of the San Andreas Fault. The proposed action would establish an EC and WQO that is expected to be achieved by approved programs and plans in progress. The proposed action also includes the establishment of an EC Performance Goal in Reach 83, as well as monitoring of salinity levels in Reach 83 of the LSJR. Implementation of the proposed action would not include development of new structures and would not expose people or structures to areas of strong seismic shaking, landslide, or liquefaction. The use or implementation of septic tanks or additional waste water disposal systems is not a component of the proposed action. There would be **no impact**.

7 GREENHOUSE GAS EMISSIONS

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
VII. GREENHOUSE GAS EMISSIONS. Would the project:				
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

7.1.1 Discussion

The proposed action involves establishing a new EC WQO that primarily would be met through the implementation of the previously approved RTM Program and completion of the Grassland Bypass Project. The new salinity objective was developed in consideration of State and federal regulations, including the State’s Sources of Drinking Water Policy, the Basin Plan, State and federal water regulations, and other State and federal requirements relevant to drinking water, stock drinking water, agricultural irrigation uses, and aquatic life protection. The proposed action also includes the establishment of an EC Performance Goal in Reach 83 and routine EC and boron monitoring in the LSJR at Crows Landing and Maze Road Bridge. Project activities would not include the use of GHG generating equipment or machinery. There would be no release of GHG-related pollutants as a result of project implementation. There would be **no impact**.

8 HAZARDS AND HAZARDOUS MATERIALS

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
VIII. HAZARDS AND HAZARDOUS MATERIALS. Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and/or accident conditions involving the release of hazardous materials into the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
h) Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

8.1.1 Discussion

The proposed action requires monitoring and evaluation of salinity levels within Reach 83 of the LSJR. A range of potential salinity levels was reviewed and compared to determine a new EC WQO that is protective of the AGR (irrigation supply water) and MUN (municipal and domestic supply) beneficial uses in Reach 83. The new EC WQO was developed in consideration of State and federal regulations, including the State’s Sources of Drinking Water Policy, the Basin Plan, State and federal water regulations, and other State and federal requirements relevant to drinking water, stock drinking water, agricultural irrigation uses, and

aquatic life protection. Achievement of AGR beneficial use protection primarily would occur through implementation of the previously approved RTM Program and completion of the Grassland Bypass Project, as well as continued implementation of Basin Plan requirements. Implementation of the proposed action would not create a significant hazard or involve the handling of hazardous materials. There would be **no impact**.

9 HYDROLOGY AND WATER QUALITY

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
IX. HYDROLOGY AND WATER QUALITY. Would the project:				
a) Violate any water quality standards or waste discharge requirements?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level that would not support existing land uses or planned uses for which permits have been granted)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial on- or offsite erosion or siltation?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in on- or offsite flooding?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Otherwise substantially degrade water quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
h) Place within a 100-year flood hazard area structures that would impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
i) Expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
j) Result in inundation by seiche, tsunami, or mudflow?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

9.1.1 Discussion

Through the establishment of a new EC WQO, the proposed action aims to protect the AGR (irrigation supply water) and MUN (municipal and domestic supply) beneficial uses in Reach 83 of the LSJR. The new salinity objective was developed in consideration of State and federal regulations, including the State's Sources of Drinking Water Policy, the Basin Plan, State and federal water regulations, and other State and federal requirements relevant to drinking water, stock drinking water, agricultural irrigation uses, and aquatic life protection. The initiation of the previously approved RTM Program and completion of the Grassland Bypass Project would provide the greatest management of salinity loads to achieve the new EC WQO. The main objective of the proposed action is to protect the AGR (irrigation supply water) beneficial use in Reach 83 of the LSJR. Implementation of the project would set an EC objective to ensure protection of the beneficial uses designated for Reach 83 of the LSJR. Enhanced water quality would be a consequence of the anticipated decreases in salinity levels during certain times of the year with implementation of the WQO and Performance Goal. There would be **no impact**.

10 LAND USE AND PLANNING

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
X. LAND USE AND PLANNING. Would the project:				
a) Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to, a general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

10.1.1 Discussion

The proposed action involves implementing a new EC WQO that would be met through the implementation of the RTM Program and completion of the Grassland Bypass Project, which have previously been approved. The new salinity objective was developed in consideration of State and federal regulations, including the State’s Sources of Drinking Water Policy, the Basin Plan, State and federal water regulations, and other State and federal requirements relevant to drinking water, stock drinking water, agricultural irrigation uses, and aquatic life protection. Additionally, the proposed action includes the establishment of an EC Performance Goal in Reach 83 and routine EC and boron monitoring in the LSJR at Crows Landing and Maze Road Bridge. The proposed action would not result in any land use changes and would not result in development of any structures or physical facilities and would therefore not physically divide an established community. The proposed action would also not conflict with any Habitat Conservation Plans or Natural Community Conservation Plans and would comply with local, State, and federal land use policies. There would be **no impact** to land use and planning.

11 MINERAL RESOURCES

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XI. MINERAL RESOURCES. Would the project:				
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

11.1.1 Discussion

The proposed action requires monitoring and evaluation of salinity levels within Reach 83 of the LSJR. A range of potential salinity levels was reviewed and compared to determine a new EC WQO that is protective of the AGR (irrigation supply water) and MUN (municipal and domestic supply) beneficial uses in Reach 83. The new EC WQO was developed in consideration of State and federal regulations, including the State’s Sources of Drinking Water Policy, the Basin Plan, State and federal water regulations, and other State and federal requirements relevant to drinking water, stock drinking water, agricultural irrigation uses, and aquatic life protection. Achievement of the action’s objective would occur through implementation of the previously approved RTM Program and completion of the Grassland Bypass Project, as well as continued implementation of Basin Plan requirements. Project implementation and operation would not include changes in existing or planned land use, disturbance of soil, or development of structures or facilities that could impact or reduce the availability of mineral resources. There would be **no impact**.

12 NOISE

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XII. NOISE. Would the project result in:				
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or in other applicable local, state, or federal standards?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

12.1.1 Discussion

As previously discussed, the proposed action’s main objective is to protect the AGR (irrigation supply water) beneficial use in Reach 83 of the LSJR by establishing a new EC WQO. The new salinity objective was developed in consideration of State and federal regulations, including the State’s Sources of Drinking Water Policy, the Basin Plan, State and federal water regulations, and other State and federal requirements relevant to drinking water, stock drinking water, agricultural irrigation uses, and aquatic life protection. The WQO would be achieved through the implementation of the RTM Program and completion of the Grassland Bypass Project. The proposed action also includes the establishment of an EC Performance Goal in Reach 83 and routine EC and boron monitoring in the LSJR at Crows Landing and Maze Road Bridge. The proposed action would not generate substantial noise and would comply with relevant and applicable local, State, and federal standards. Project activities include monitoring and testing of water quality conditions, and would not involve the use of noise-generating equipment. There would be **no impact**.

13 POPULATION AND HOUSING

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XIII. POPULATION AND HOUSING. Would the project:				
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Displace substantial numbers of existing homes, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

13.1.1 Discussion

Through the establishment of a new EC WQO, the proposed action aims to protect the AGR (irrigation supply water) and MUN (municipal and domestic supply) beneficial uses in Reach 83 of the LSJR. The new salinity objective was developed in consideration of State and federal regulations, including the State’s Sources of Drinking Water Policy, the Basin Plan, State and federal water regulations, and other State and federal requirements relevant to drinking water, stock drinking water, agricultural irrigation uses, and aquatic life protection. The initiation of the previously approved RTM Program and completion of the Grassland Bypass Project would provide the greatest management of salinity loads needed to achieve the new EC WQO. The main objective of the proposed action is to protect the AGR (irrigation supply water) beneficial use in Reach 83. The project area currently serves primarily as agricultural land. Implementation of the proposed action would not result in addition or removal of any homes and therefore would not result in an increase in population or in the displacement of people or homes. There would be **no impact** on population and housing.

14 PUBLIC SERVICES

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XIV. PUBLIC SERVICES. Would the project:				
a) Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:				
Fire protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Police protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Other public facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

14.1.1 Discussion

The proposed action requires monitoring and evaluation of salinity levels within Reach 83 of the LSJR. A range of potential salinity levels was reviewed and compared to determine a new EC WQO that is protective of the AGR (irrigation supply water) and MUN (municipal and domestic supply) beneficial uses in Reach 83. The new EC WQO was developed in consideration of State and federal regulations, including the State’s Sources of Drinking Water Policy, the Basin Plan, State and federal water regulations, and other State and federal requirements relevant to drinking water, stock drinking water, agricultural irrigation uses, and aquatic life protection. Achievement of the objective will occur through the previously approved RTM Program and completion of the Grassland Bypass Project. The proposed action also includes the establishment of an EC Performance Goal in Reach 83 and EC and boron monitoring in the LSJR at Maze Road Bridge and Crows Landing. Implementation of the proposed action would not require any physical alterations that would conflict with or reduce access to public services. Monitoring of salinity levels in Reach 83 would not result in the obstruction of service-designated routes or roadways. There would be **no impact**.

15 RECREATION

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XV. RECREATION. Would the project:				
a) Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

15.1.1 Discussion

The proposed action’s main objective is to protect the AGR (irrigation supply water) beneficial use in Reach 83 of the LSJR by establishing a new EC WQO. The new salinity objective was developed in consideration of State and federal regulations, including the State’s Sources of Drinking Water Policy, the Basin Plan, State and federal water regulations, and other State and federal requirements relevant to drinking water, stock drinking water, agricultural irrigation uses, and aquatic life protection. The new WQO would be achieved through the implementation of the RTM Program and completion of the Grassland Bypass Project. The proposed action also includes the establishment of an EC Performance Goal in Reach 83 and routine EC and boron monitoring in the LSJR at Crows Landing and Maze Road Bridge. Implementation of the proposed action would not increase population and would not increase use of existing recreational facilities or demand for new recreational facilities. There would be **no impact**.

16 TRANSPORTATION/TRAFFIC

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XVI. TRANSPORTATION/TRAFFIC. Would the project:				
a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Result in inadequate emergency access?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

16.1.1 Discussion

The proposed action involves monitoring and evaluation of salinity levels in Reach 83 of the LSJR. A range of potential salinity levels was reviewed and compared to determine a new EC WQO that is protective of the AGR (irrigation supply water) and MUN (municipal and domestic supply) beneficial uses in Reach 83. The new EC WQO was developed in consideration of State and federal regulations, including the State’s Sources of Drinking Water Policy, the Basin Plan, State and federal water regulations, and other State and federal requirements relevant to drinking water, stock drinking water, agricultural irrigation uses, and aquatic life protection. Achievement of these objectives would occur through implementation of the previously approved RTM Program and completion of the Grassland Bypass Project. The proposed action also includes the establishment of an EC Performance Goal in Reach 83 and EC and boron monitoring in the LSJR at Maze Road Bridge and Crows Landing. The proposed action would not produce an increase in traffic levels or require the construction of new roadways. Project activities would occur in compliance with all applicable plans, policies, and ordinances and would have no effect on air traffic. There would be **no impact**.

17 UTILITIES AND SERVICE SYSTEMS

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XVII. UTILITIES AND SERVICE SYSTEMS. Would the project:				
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Result in a determination by the wastewater treatment provider that serves or may serve the project that it has adequate capacity to serve the project’s projected demand, in addition to the provider’s existing commitments?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Be served by a landfill with sufficient permitted capacity to accommodate the project’s solid waste disposal needs?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Comply with federal, state, and local statutes and regulations related to solid waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

17.1.1 Discussion

The proposed action involves the establishment of a new EC WQO that would be met through the implementation of the RTM Program and completion of the Grassland Bypass Project, which have previously been approved. The new salinity objective was developed in consideration of State and federal regulations, including the State’s Sources of Drinking Water Policy, the Basin Plan, State and federal water regulations, and other State and federal requirements relevant to drinking water, stock drinking water, agricultural irrigation uses, and aquatic life protection. Additionally, the proposed action includes the establishment of an EC Performance Goal in Reach 83, as well as routine EC and boron monitoring in the LSJR at Crows Landing and Maze Road Bridge.

If adopted in a Basin Plan Amendment, the proposed WQO for Reach 83 would be used in the derivation of future effluent limitations contained in National Pollutant Discharge Elimination System (NPDES) permits for the publically owner treatment works (POTW) operated by the Cities of Modesto and Turlock. The Central Valley Water Board, the entity responsible for developing effluent limitations and issuing NPDES permits, is required to adopt effluent limitations that protect the AGR (irrigation water supply) and MUN (municipal and domestic supply) beneficial uses in the LSJR, do not impact the attainment of the existing Vernalis EC objectives, and comply with State and federal antidegradation policies. While future EC effluent limitations

for the Cities of Modesto and Turlock cannot be developed at this time (i.e., prior to the expiration of each city's current NPDES permit), future NPDES permitting determinations will need to account for the continued impact of water conservation, water supply constraints, and Extended Dry Periods. Additionally, modeling work should be performed to assess the impact of a range of candidate effluent limitations on compliance with water quality objectives in the LSJR downstream of each POTW. The Extended Dry Period exception included in the Preferred Alternative should be considered in this evaluation. At this time, the potential impacts to POTWs in the project area are uncertain and no answer has been provided to question 17b above. Additional discussion among LSJRC members is needed before an answer to Checklist question 17b can be provided. Depending on how question 17b is answered, revisions to other Checklist questions may be necessary. Project implementation would not involve the discharge of solid waste nor require landfill servicing. ***Impact analysis not yet final.***

18 MANDATORY FINDINGS OF SIGNIFICANCE

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XVIII. MANDATORY FINDINGS OF SIGNIFICANCE.				
a) Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of an endangered, rare, or threatened species, or eliminate important examples of the major periods of California history or prehistory?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Does the project have impacts that are individually limited, but cumulatively considerable? (“Cumulatively considerable” means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Does the project have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Authority: Public Resources Code Sections 21083, 21083.5.

Reference: Government Code Sections 65088.4.

Public Resources Code Sections 21080, 21083.5, 21095; *Eureka Citizens for Responsible Govt. v. City of Eureka* (2007) 147 Cal.App.4th 357; *Protect the Historic Amador Waterways v. Amador Water Agency* (2004) 116 Cal.App.4th at 1109; *San Franciscans Upholding the Downtown Plan v. City and County of San Francisco* (2002) 102 Cal.App.4th 656.

18.1.1 Discussion

As previously discussed, the proposed action’s main objective is to protect the AGR (irrigation supply water) beneficial use in Reach 83 of the LSJR by establishing a new EC WQO. The new salinity objective was developed in consideration of State and federal regulations, including the State’s Sources of Drinking Water Policy, the Basin Plan, State and federal water regulations, and other State and federal requirements relevant to drinking water, stock drinking water, agricultural irrigation uses, and aquatic life protection. The WQO primarily would be achieved through the implementation of the RTM Program and completion of the Grassland Bypass Project. The proposed action also includes the establishment of an EC Performance Goal in Reach 83 and routine EC and boron monitoring in the LSJR at Crows Landing and Maze Road Bridge. The abovementioned activities do not require the physical alteration of existing structures or habitats and would not result in the loss of an endangered, threatened, or listed species, or any historically significant resources. There would be no cumulatively considerable adverse effects on the environment or human beings. Implementation of the proposed action would improve water quality of the project site for the benefit of biological and human use. There would be **no impact** on notable species, cultural resources, or humans.

19 REFERENCES

- California Department of Transportation. 2011a. *San Joaquin County*. Available: http://www.dot.ca.gov/hq/LandArch/scenic_highways/. Accessed June 2015.
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- Larry Walker Associates (LWA). 2015a. *Task 4 – Implementation Planning for Proposed Salinity Objectives*. Final Report. Prepared for San Joaquin Valley Drainage Authority. Submitted by Larry Walker Associates, in association with Systech Water Resources, Carollo Engineers, and PlanTierra. July 2015.
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APPENDIX A

PUBLIC COMMENTS RECEIVED ON PROPOSED PROJECT

Comments to be provided in next draft of SED.